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FULL-SCALE MODEL IN WIND TUNNEL

Engineers test Wright glider replica

Before they could learn to fly, the Wright brothers had to learn to glide. A life-size reproduction of one of the aviation pioneers' early gliders is undergoing wind tunnel tests at the Langley Full Scale Tunnel, owned by NASA's Langley Research Center in Hampton, Va., and operated by Old Dominion University (ODU) in Norfolk, Va.

During this experiment, which is being underwritten by the Langley Research Center, engineers will take a number of different measurements to determine how the Wright 1901 glider performed. The 22-foot wingspan aircraft was the second glider designed by Orville and Wilbur Wright as they worked to create the first human powered flying machine.

"It's fitting that we invest in wind tunnel tests to document the Wrights' discoveries. Orville Wright was on the advisory committee that established NASA's Langley Research Center in 1917, just fourteen years after that first historic flight at Kitty Hawk, North Carolina. Wright also visited Langley a number of times," said Mike Finneran, head of NASA Langley's Office of External Affairs. "Our first engineers built on the Wright brothers early successes and helped advance aeronautics into a modern science."

The wind tunnel tests are part of ongoing research being done by ODU and the Wright Experience of Warrenton, Va. The Wright Experience has been contracted by the not-for-profit Discovery of Flight Foundation, also in Warrenton, to uncover and document how the Wright brothers, neither of whom finished high school, managed to conquer the principles of flight in five short years. None of the Wrights' first prototype aircraft were saved, nor were their early construction documents and drawings.

To try to retrace the brothers' ground-breaking steps to flight, Wright Experience founder Ken Hyde and his team are researching, reconstructing, testing, analyzing and documenting authentic full-scale reproductions of many of the Wright brothers' aircraft and engines.

"Rediscovering the secrets of the Wright brothers to inspire a new generation is what motivates The Wright Experience," said Hyde. "Our journey will continue through December 17, 2003 with the flight of a reproduction of the 1903 Wright flyer at Kitty Hawk. Our ultimate goal is to build and test all of the Wrights' aircraft. It is the Wright Experience's mission to keep the Wright brothers dream alive."

The 1901 glider was an important step in the Wright's development of the Flyer, not because it was successful, but because it wasn't.

"The 1901 glider was extremely difficult to control and it didn't demonstrate flight-handling characteristics that were consistent with theories used by the Wright brothers," said Professor Robert Ash, Wright test program manager for ODU. "So Wilbur and Orville decided they needed a different approach. They built a small-scale wind tunnel to evaluate nearly 200 airfoil and wing models. They started the world's first successful wind tunnel-based aircraft design program, a precursor to the systems engineering approach used by the aviation industry today."

The Wright Experience and ODU have already built and tested a number of reproductions of Wright propellers in their quest to "reverse engineer" the 1903 Wright Flyer and other early Wright aircraft. The reproduction of the Flyer is under construction at the Wright Experience workshop.

For more information on the Wright Experience please check the Internet at: http://www.wrightexperience.com

For more information on at the Langley Full Scale Tunnel please check the Internet at: http://www.lfst.com

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Reporters are invited to observe the wind tunnel tests of the 1901 Wright glider reproduction and interview Ken Hyde and other researchers Monday afternoon, October 29. Crews should arrive at the Langley Air Force Base LaSalle gate by 1:15 p.m. so they can be escorted to the Langley Full Scale Tunnel.